

**UNITED STATES DEPARTMENT OF COMMERCE****Patent and Trademark Office**Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231

SERIAL NUMBER	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
08/324,443	10/17/94	DOYLE	M 02307553
		EXAMINER	
		B3M1/1213	
		ART UNIT: 14 PAPER NUMBER 6	
		2317	
		DATE MAILED: 12/13/96	

This is a communication from the examiner in charge of your application.  
COMMISSIONER OF PATENTS AND TRADEMARKS

This application has been examined  Responsive to communication filed on 8-9-96  This action is made final.

A shortened statutory period for response to this action is set to expire 3 month(s), 0 days from the date of this letter.  
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

**Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:**

1.  Notice of References Cited by Examiner, PTO-892.  
 2.  Notice of Draftsman's Patent Drawing Review, PTO-948.  
 3.  Notice of Art Cited by Applicant, PTO-1449.  
 4.  Notice of Informal Patent Application, PTO-152.  
 5.  Information on How to Effect Drawing Changes, PTO-1474.  
 6. \_\_\_\_\_

**Part II SUMMARY OF ACTION**

1. Claims 1 - 56 are pending in the application.  
Of the above, claims \_\_\_\_\_ are withdrawn from consideration.  
 2. Claims 16 have been cancelled.  
3.  Claims \_\_\_\_\_ are allowed.  
4.  Claims 1 - 15, 17 - 56 are rejected.  
5.  Claims \_\_\_\_\_ are objected to.  
6.  Claims \_\_\_\_\_ are subject to restriction or election requirement.  
7.  This application has been filed with informal drawings under 37 C.F.R. 1.85 which are acceptable for examination purposes.  
8.  Formal drawings are required in response to this Office action.  
9.  The corrected or substitute drawings have been received on \_\_\_\_\_. Under 37 C.F.R. 1.84 these drawings are  acceptable;  not acceptable (see explanation or Notice of Draftsman's Patent Drawing Review, PTO-948).  
10.  The proposed additional or substitute sheet(s) of drawings, filed on \_\_\_\_\_, has (have) been  approved by the examiner;  disapproved by the examiner (see explanation).  
11.  The proposed drawing correction, filed \_\_\_\_\_, has been  approved;  disapproved (see explanation).  
12.  Acknowledgement is made of the claim for priority under 35 U.S.C. 119. The certified copy has  been received  not been received  been filed in parent application, serial no. \_\_\_\_\_; filed on \_\_\_\_\_.  
13.  Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.  
14.  Other

**EXAMINER'S ACTION**

**Part III DETAILED ACTION**

Applicant's arguments filed 08-09-96 have been considered but are moot in view of the new grounds of rejection.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

*(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.*

Claim 1 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vetter "Mosaic and the World-Wide Web" and further in view of Hansen "Andrew as a Multiparadigm Environment for Visual Languages".

As per claim 1, Vetter disclosed a method for running an application program in a computer network environment essentially as claimed, comprising:

providing at least one client workstation and one network server coupled to said network environment, wherein said network environment is a distributed hypermedia environment [the World-Wide Web];

executing, at said client workstation, a browser application [Mosaic], that parses a distributed hypermedia document to

identify text formats included in the distributed hypermedia document and for responding to predetermined text formats to initiate processes specified by the text format;

utilizing said browser to display, on said client workstation, at least a portion of a first hypermedia document received over said network from said server, wherein said first hypermedia document is displayed within a first browser-controlled window on said client workstation and wherein said first distributed hypermedia document includes an embed text format [p.52 col.1 URL] that specifies the location of an object external to the first distributed hypermedia document and that specifies type information utilized by said browser to identify and locate an executable application [CGI script and external viewer] external to the first distributed hypermedia document;

invoking, with said browser application, said executable application [it is known that that Mosaic can launch CGI scripts on the server and external viewer applications on the user's workstation] to display and process said object.

Mosaic does not display and process said object within the first browser-controlled window while a portion of said first distributed hypermedia document continues to be displayed within said browser-controlled window. The external viewer is launched into a separate window to process the object.

Hansen teaches "it may be adequate to display each sublanguage element in a separate window, but this runs the risk

of chaotic imagery among which it is difficult to discern the relationships among program segments. Instead, the author should have the power to organize the program fragments for perusal by the reader. The organization itself, together with commentary, aids the reader in comprehending the program." [p.256 col.1]

Vetter discloses that Mosaic's functionality can be extended by having custom servers and by letting other applications control its display remotely [p.50 2nd paragraph]. Hence, it would have been obvious for one of ordinary skill in the art to extend Mosaic's functionality to enable external application to display and process the object within the browser-controlled window because it would have improved the system by reducing clustering of the display and aiding the reader comprehension of the hypermedia document.

As per claim 44, it is rejected under similar rationale as for claim 1 above.

Claims 2-5, 10-14, 24-27, 45-48, and 55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vetter "Mosaic and the World-Wide Web", Hansen "Andrew as a Multiparadigm Environment for Visual Languages", and further in view of Filepp et al. US patent 5,347,632.

As per claim 2, Vetter does not specifically disclose interatively controlling the executable application via communication over the network.

Filepp discloses a distributed system for interactive control of object through communication over network wherein the controllable applications communicate over the network to provide user interaction of the object within the current document

~~TEACHING~~ ['Page' -see col.5 lines 5-18 and col.8 lines 15-28]. Vetter disclosed that Mosaic and the WWW currently lack direct support for application-specific data and support for controlling the presentation of nontext data [p.53 col.3]. Hence, it would have been obvious for one of ordinary skill in the art to adapt ~~TEACHING~~ Filepp's teaching to work the WWW because it would have improved the system to provide more presentation and control functionality's. Vetter suggested letting other applications control Mosaic display remotely [p.50 2nd paragraph]. Hence, it is apparent that the system as modified would interactivelly controlling said controllable application from said client workstation via communications sent over said distributed hypermedia environment.

As per claim 3, it is well known in distributed computing to executing, on the network server, one or more instructions in response to commands from a client and sending information from said network server to the client workstation in response to said executed instructions. It is apparent in the system as modified

that the client would process the information and interactively control said controllable application.

As per claim 4, Filepp teaches the instruction for controlling the object reside on the client workstation [col.7 line 19].

As per claim 5, it is apparent in the system as modified that communication continue to be exchange between the controllable application and the browser in order for the controllable application to control the object within the browser's window.

As per claims 10-14, the methods recited are apparent in the system as modified.

As per claims 45-48, they are rejected under similar rationale as for claims 2-5 above.

As per claim 24, it is rejected under similar rationale as for claims 1+2 above. The references do not specifically disclose the step of transferring ..., accepting ..., executing ..., communicating ..., using ... The steps recited is inherent in the prior art as modified because:

It is well known in the art, at the time of the invention, that HTML documents contains links specified by URL's. It is known that HTML documents transfers involves HTTP protocol messages. The process involves:

transferring, over the network, a hypermedia document [the HTML document] with embedded objects [URL links, mapped images, fill-in forms, etc.] from a server computer to the client computer;

parsing the document by the browser to locate reference to external objects [URL's, images, etc.];

accepting first signals from the user input device [clicking on an URL link, or a mapped image, or a form's 'submit' button]

issuing commands [HTTP message with the linked URL, or coordinates where the mapped image was clicked, or the form's content] from the client computer to a first computer in response to the signal [it is known that an HTTP message in an HTML document can direct to any computer connected to the Internet that accept HTTP protocol];

executing instructions by a first additional computer [Filepp - col.4 lines 35-43 , "multiple servers"] and generate information about manipulating the embedded object; communicating the information to the client; and using the client to manipulate the object according to the communicated information [Filepp col.8 lines 15-28].

As per claims 25, 27, the document is a hypermedia document [Vetter p.49].

DET-100-20250

As per claim 26, Filepp discloses using multiple computer to response to issued commands [col.4 lines 35-43 , "multiple servers"] .

As per claim 55, it is rejected under similar rationale as for claim 24 above.

Claims 6-9, and 49-53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vetter "Mosaic and the World-Wide Web", Hansen "Andrew as a Multiparadigm Environment for Visual Languages", Filepp et al. US patent 5,347,632, and further in view of Rizzo "What's OpenDoc?" (prior art submitted by applicant).

As per claims 6-9 and 49-52, Vetter, Hansen, Filepp do not specifically disclose application being a spreadsheet, a database, or word processor program. Rizzo discloses a systems that allows for embedding object of different applications (word processing, spreadsheet, database, movie) in one document and manipulation of the object within the document using functions of the corresponding application. Hence, it was well within the skill on one of ordinary skill in the art to provide controllable application for database, spreadsheet, word processing, etc. functions. The type of program provided would have been a matter of design choice.

As per claim 53, it is apparent the HyperText Markup Language would be used to specify the controllable application since the system is for use in the WWW.

**Claims 28-33, 34-43, and 56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vetter "Mosaic and the World-Wide Web", Hansen "Andrew as a Multiparadigm Environment for Visual Languages", Filepp et al. US patent 5,347,632, and further in view of Moran "Tele-Nice-Slicer: A New Tool for the Visualization of Large Volumetric Data".**

As per claims 28, 30, and 32 the references do not specifically disclose multi-dimensional image displayable in plurality of orientations, and function to determine the new orientation and rendering of image. The type of objects and functions provided would have been a matter of design choice.

Moran discloses a distributed system for interactive control and visualization of graphical object through communication over network. Moran teaches determining orientation and rendering of images by sending command comprising of text fields [p.3 col.1]. Vetter disclosed that Mosaic and the WWW currently lack direct support for application-specific data and support for controlling the presentation of nontext data [p.53 col.3]. Hence, it would have been obvious for one of ordinary skill in the art to adapt Moran teaching to the WWW because it would have improved the

system to provide powerful visualization, presentation and control to WWW users.

As per claims 29, 31, 33, Vetter teaches the document is a hypermedia document [Vetter p.49].

As per claims 34 and 56, they are rejected under similar rationale as for claim 24 above. The references do not specifically disclose multi-dimensional image displayable in plurality of orientations, and function to determine the new orientation and rendering of image.

Moran discloses a distributed system for interactive control and visualization of graphical object through communication over network. Moran teaches determining orientation and rendering of images by sending command comprising of text fields to server[p.3 col.1]. Vetter disclosed that Mosaic and the WWW currently lack direct support for application-specific data and support for controlling the presentation of nontext data [p.53 col.3]. Hence, it would have been obvious for one of ordinary skill in the art to adapt Moran teaching to the WWW because it would have improved the system to provide powerful visualization, presentation and control to WWW users.

Moran does not specifically disclose a second server. However, it would have been obvious for one of ordinary skill in the art to provide plurality of servers to speed up processing.

As per claims 35, 37, 39, 41, and 43, Vetter teaches the system is a distributed hypermedia environment [p.49].

As per claim 36, Moran teaches distributing the processing on various computers [client - server]. It would have been obvious for one of ordinary skill in the art to distribute the processing to the machine such that the instructions is executed faster.

As per claims 38 and 40, Moran teaches determining orientation and rendering of images [p.2 - p.3].

As per claim 42, Moran teaches dynamically manipulate the object [p.2 - zoom]. It is apparent that the system as modified would accept signal from user input to indicate a second orientation of an object.

Claim 15, 17-23, and 54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vetter "Mosaic and the World-Wide Web" and further in view of Hansen "Andrew as a Multiparadigm Environment for Visual Languages" and Moran "Tele-Nice-Slicer: A New Tool for the Visualization of Large Volumetric Data".

As per claim 15, it is rejected under similar rationale as for claim 1 above. Vetter and Hansen do not specifically teach a multidimensional data visualization application.

Moran discloses a distributed system for interactive control and visualization of graphical object through communication over

network. Moran teaches determining orientation and rendering of images by sending command comprising of text fields [p.3 col.1]. Vetter disclosed that Mosaic and the WWW currently lack direct support for application-specific data and support for controlling the presentation of nontext data [p.53 col.3]. Hence, it would have been obvious for one of ordinary skill in the art to adapt Moran teaching to the WWW because it would have improved the system to provide powerful visualization, presentation and control to WWW users.

As per claims 17-22, the recited limitations - volume visualization, 2d image, image analysis, animated sequences, geometric viewer, and molecular modeling - would have been a matter of design choice because they are merely well known visualization methods.

As per claim 23, it is apparent in the system as modified that communication continue to be exchange between the multidimensional data visualization application and the browser in order for the visualization application to control the object within the browser's window.

As per claim 54, it is rejected under similar rationale as for claim 15 above.

**The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.**

Wynne et al. "Lean Management, Group Support Systems, and Hypermedia: a combination whose time has come", discloses a hypermedia product - "HyperNet" - which has 'active link' for triggering execution of external programs [see p.113].

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

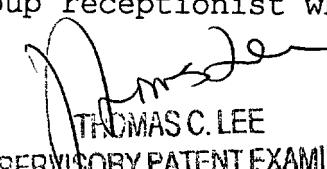
A shortened statutory period for response to this final action is set to expire THREE MONTHS from the date of this action. In the event a first response is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event will the statutory period for response expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dung Dinh whose telephone number is (703) 305-9655. The examiner can normally be reached on Monday-Thursday from 7:00 AM - 4:30 PM. The examiner can also be reached on alternate Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Lee can be reached at (703) 305-9717. The fax phone number for this group is (703) 308-5359.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-9600.

Dung Dinh  
Dec. 10, 1996

  
THOMAS C. LEE  
SUPERVISORY PATENT EXAMINER

230